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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,735	01/26/2001	Sid Chaudhuri	2000-0051A	5181

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EXAMINER

FERRIS, DERRICK W

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/769,735

Applicant(s)

CHAUDHURI ET AL.

Examiner

Derrick W. Ferris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-91 is/are pending in the application.
- 4a) Of the above claim(s) 84 and 91 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-26 and 28-53 is/are allowed.
- 6) ☒ Claim(s) 27, 54, 55, 57-83, 85-90 is/are rejected.
- 7) ☒ Claim(s) 56 and 66 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/13/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. **Claims 84 and 91** are **withdrawn** from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made in the reply filed on 12/29/2004.

Specification

2. The disclosure is objected to because of the following informalities: please update the cross-reference information on pages 1, 5, and 10.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claim 60** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation "said alarm" at line 2 lacks proper antecedent basis. Claim 60 should probably depend on claim 59.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

6. **Claims 74-77, 78-81, and 85-88** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application 2004/0042402 A1 to *Galand et al.* ("*Galand*").

As to **claim 74**, see e.g., figure 10 of *Galand*. The alternative path as shown in the figure teaches redirecting transmissions away from a failed component using a pre-computed alternative path. A scope alarm is e.g., a Link Change Update message, see e.g., paragraph 0326 on page 12. Optimization of network resources using traditional routing protocols as taught e.g., at paragraph 0106 on page 5.

As to **claim 75**, the topology update is sent to all the affected routers, see e.g., paragraph 0270 on page 10.

As to **claim 76**, see e.g., figure 10 where the immediately neighboring node is node B.

As to **claim 77**, see e.g., figures 7 and 8. Also note that either method can be used in combination, see e.g., paragraph 0203 on page 8.

As to **claim 78**, see similar rejection to claim 74.

As to **claim 79**, see similar rejection to claim 76.

As to **claim 80**, see similar rejection to claim 75.

As to **claim 81**, see similar rejection to claim 77.

As to **claim 85**, see similar rejection to claim 74.

As to **claim 86**, see similar rejection to claim 76.

As to **claim 87**, see similar rejection to claim 75.

As to **claim 88**, see similar rejection to claim 77.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 27, 54, 55, 57, 61-65, 67, 70, 71, 72, 73, 82, and 89** are rejected under 35 U.S.C.

103(a) as being unpatentable over U.S. Patent Application 2004/0042402 A1 to *Galand et al.*

(“*Galand*”) in view of U.S. Patent No. 6,728,484 B1 to *Ghani et al.* (“*Ghani*”).

As such to **claim 27**, *Galand* discloses naming each network addressable element in said reconfigurable network using either an address or label, see e.g., figure 10; determining current topology in said reconfigurable network by using routing protocols such as OSPF to update a topology database, see e.g., paragraph 0080; determining current resources in said reconfigurable network by using a bandwidth table, see e.g., as paragraph 0095; requesting establishment of a restorable lightpath e.g., as part of step 110 in paragraph 067; requesting reservation of restoration capacity as part of step 1 e.g., in paragraph 0333 and step 110 in paragraph 0267; allocating said path e.g., as part of step 2 in paragraph 334 or step 111 in paragraph 0268; and reserving the reservation capacity e.g., as step 112 in paragraph 0296. In particular, examiner notes that either the non disruptive path switching method in figure 7 or the fast non distributive path switching method in figure 8 reads on the previous claim limitations since both can be jointly used, see e.g., paragraph 0203 on page 8.

Galand may be silent or deficient to the further limitation of an optical network and a lightpath in view of a path as taught by *Galand*.

Ghani teaches the further recited limitation above at e.g., column 5, lines 34-36.

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The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Galand* by clarifying that a path is a light path when traverses an optical network.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to transmit data over an optical network. In particular, *Ghani* cures the above-cited deficiency by providing a motivation found at e.g., column 5, lines 34-36. Second, there would be a reasonable expectation of success since *Ghani* accepts commands from routers using dynamic routing protocols such as MPLS where *Galand* teaches routing using MPLS. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claim 54**, see similar rejection to claim 27.

As to **claim 55**, see similar rejection to claim 27.

As to **claim 57**, with respect to monitoring a node and topology updates, see e.g., paragraph 0326 on page 12. Here the alarm message generated is a Link Change Update Message.

As to **claim 61**, the limitation is taught e.g., in combination. In particular, an alarm triggers the topology database of the router as taught in *Galand* and where *Ghani* teaches that such routing updates are passed onto the CP modules which in turn pass on the messages to other CP modules where the CP modules further configured the OLXCs thus teaching a chain of control.

As to **claim 62**, the exception is handled immediately since the updates are sent to the topology database as taught by *Galand*.

As to **claim 63**, the limitation is taught e.g., in combination. In particular, *Galand* teaches using a pre-calculated restoration route, see e.g., paragraph 0200. When a failure is detected by a transit node or originating node, an alarm is sent to the topology database. This alarm is used to perform a routing over pre-computed paths, see e.g., paragraph 0202. This a pre-calculated restoration route is retrieved from the database and then implemented. *Ghani* teaches that when routing updates are implemented the CP modules generate messages to configure the OLXCs. Thus a restoration message along the pre-calculated restoration path is implemented where the CP modules forward the restoration message to each OLXC along the pre-calculated restoration path where the transmissions are then rerouted on the restoration route (i.e., the routers of *Ghani* perform the restoration process as taught by *Galand*).

As to **claim 64**, *Galand* teaches to always be on the lookout for a better route and that when routes are restored that the topology table is updated such that *Galand* implicitly teaches re-establishing a previously provisioned path assuming the pre-provisioned path was a better path (i.e., has less hops).

As to **claim 65**, see similar rejection to claim 55.

As to **claim 67**, see similar rejection to claim 57.

As to **claim 70**, see similar rejection to claim 62.

As to **claim 71**, see similar rejection to claim 61.

As to **claim 72**, see similar rejection to claim 63.

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As to **claim 73**, see similar rejection to claim 64.

As to **claim 82**, see similar rejection to claim 27.

As to **claim 89**, see similar rejection to claim 27.

9. **Claims 58, 59, and 68** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2004/0042402 A1 to *Galand et al.* ("*Galand*") in view of U.S. Patent No. 6,728,484 B1 to *Ghani et al.* ("*Ghani*") and in further view of U.S. Patent No. 5,710,885 to *Bondi*.

As to **claim 58**, *Galand* and *Ghani* are silent or deficient to the further limitation of using a ping to determine whether transmissions have occurred and generating an alarm.

Bondi teaches the above limitation e.g., in column 6, lines 40-47. In particular, if a ping is not received then a topology map is updated.

As such, the proposed modification is to include the teachings of *Bondi* such that one skilled in the art would know to use a ping message to test a connection where if the ping fails then a topology map is updated as taught by *Bondi* where when a topology map is updated a Link Change Update message is generated (i.e., an alarm) as taught by *Galand*.

As to **claim 59**, see similar rejection to claim 57.

As to **claim 68**, see similar rejection to claim 58.

10. **Claims 60 and 69** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2004/0042402 A1 to *Galand et al.* ("*Galand*") in view of U.S. Patent No.

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6,728,484 B1 to *Ghani et al.* ("*Ghani*") and in further view of "A Framework for Multiprotocol Label Switching" to *Callon et al.* ("*Callon*").

As to **claim 60**, *Galand* teaches passing the alarm to the topology database but it may not be clear that the topology database is at an IP layer.

Callon teaches that a topology database is at an IP layer when using MPLS, see e.g., Section 1.1 on page 2.

Thus the examiner proposes to modify at least *Galand* by clarifying that MPLS as taught by *Galand* can be based on IP and therefore use an IP layer for handling.

Hence examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to use IP. In particular, one skilled in the art would have been motivated to use IP since MPLS is not confined to any link layer technology and that is can work with any media over which network layer packets can be passed between networking entities. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claim 69**, see similar rejection to claim 60.

11. **Claims 83 and 90** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2004/0042402 A1 to *Galand et al.* ("*Galand*") in view of "A Framework for Multiprotocol Label Switching" to *Callon et al.* ("*Callon*").

As to **claim 83**, *Galand* teaches changing the address of a packet, see e.g., paragraph 0085 on page 4 but may not specifically mention an IP packet.

Callon teaches that a topology database is at an IP layer when using MPLS, see e.g., Section 1.1 on page 2.

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Thus the examiner proposes to modify at least *Galand* by clarifying that the packet is an IP packet.

Hence examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to use IP. In particular, one skilled in the art would have been motivated to use IP since MPLS is not confined to any link layer technology and that is can work with any media over which network layer packets can be passed between networking entities. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claim 90**, see similar rejection to claim 84.

Allowable Subject Matter

12. **Claims 1-17, 18-26, 28-43, and 44-53** allowed.
13. **Claims 56 and 66** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663


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RICKY NGO
PRIMARY EXAMINER

